

**CLAIMS**

1. An on-chip laboratory comprising a support (51, 81, 100, 141, 170), at least one fluidic network, at least one fluid inlet orifice connected to the fluidic network and at least one fluid outlet orifice connected to the fluidic network, a thin layer (53, 83, 111, 143, 181) integral with the support and in which the fluidic network and an electronebulization nozzle (65, 95, 125, 155, 195) are made, the electronebulization nozzle overhanging relatively to the support and comprising a channel (64, 94, 124, 154, 194), one end of which is connected to the fluidic network and the other end of which forms said fluid outlet orifice, the channel being fitted with electrical conduction means (59, 89, 129, 165, 205) forming at least one electrode, characterized in that the thin layer (111, 181) is a layer fixed by direct sealing onto the support (100, 170).

2. The on-chip laboratory according to claim 1, characterized in that as the support (100) is in a semiconducting material, the electrical conduction means (129) are a doped portion of said support.

3. The on-chip laboratory according to claim 1, characterized in that the support is in a conducting material.

4. The on-chip laboratory according to any of claims 1 to 3, characterized in that it comprises a

cover (131, 201) hermetically covering the fluidic network, this cover being provided with a fluid access means (133, 203) at the fluid inlet orifice.

5                    5. The on-chip laboratory according to claim 1, characterized in that it comprises a cover (201) hermetically covering the fluidic network, this cover being provided with a fluid access means (203) at the fluid inlet orifice and being provided with said  
10                    electrical conduction means (205).

                  6. The on-chip laboratory according to claim 5, characterized in that the cover is in a conducting material.

15                    7. The on-chip laboratory according to claim 5, characterized in that the cover is in a semiconducting material, the electrical conducting means comprising a doped portion of the cap.